

**SECTION XVII**  
**FLOODPLAIN DEVELOPMENT ORDINANCE**

The following regulations shall apply to all lands designated as special flood hazard areas by the Federal Emergency Management Agency in its "Flood Insurance Study of the County of Merrimack, NH" dated April 19, 2010, together with the associated Flood Insurance Rate Maps dated April 19, 2010, are declared to be part of the Hopkinton Floodplain Development Ordinance.

**Item I. Definition of Terms:**

**"Area of Special Flood Hazard"** is the land in the flood plain with a community subject to a one percent or greater chance of flooding in any given year. The area is designated a Zone(s) A and AE on the Flood Insurance Rate Map.

**"Base Flood"** means the flood having a one percent chance of being equaled or exceed in any given year.

**"Basement"** means any area of the building having its floor subgrade (below ground level) on all sides.

**"Building"** -- see "Structure."

**"Development"** means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**"FEMA"** means the Federal Emergency Management Agency.

**"Flood" or "Flooding" means:** A general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal waters.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

**"Flood Elevation Study"** means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-rated erosion hazards.

**"Flood Insurance Rate Map" (FIRM)** means an official map of a community, on which the Federal Emergency Management Agency has delineated both the special hazard areas and the risk premium zones applicable to the community.

**"Flood Insurance Study"** see "Flood Elevation Study".

**"Floodplain" or "Flood-prone Area"** means any land area susceptible to being inundated by water from any source (see definition of "flooding").

**"Flood Proofing"** means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

**"Floodway"** -- see "Regulatory Floodway."

**"Functional Dependent Use"** means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, or ship building and ship repairs facilities, but does not include long-term storage or related manufactured facilities.

**“Highest adjacent grade”** means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**“Historic Structure”** means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - 1) By an approved state program as determined by the Secretary of the Interior, or
  - 2) Directly by the Secretary of the Interior in states without approved programs.

**“Lowest Floor”** means the lower floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor: Provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

**“Mean Sea Level”** means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

**“Manufactured Home”** means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes the term “manufactured home” also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. This includes manufactured homes located in a manufactured home park or subdivision.

**“Manufactured Home Park or Subdivision”** means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

**“New Construction”** means, for the purpose of determining insurance rates, structure for which the start of construction commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, *new construction* means structures for which the *start of construction* commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

**“100-Year Flood”** see “Base Flood.”

**“Recreation Vehicle”** means a vehicle which is (i) built on a single chassis; (ii) 400 square feet or less when measured at the largest horizontal projection; (iii) designed to be self propelled or permanently towable by a light duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

**“Regulatory Floodway”** means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface

elevation more than one foot at any point. These areas are designated as floodways on the Flood Insurance Rate Maps.

**“Riverine”** means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

**“Special Flood Hazard Area”** means an area having special flood mudslide (i.e., mudflow) and/or flood-related erosion hazards, and shown on an FIRM as Zone A or AE. (See Area of Special Flood Hazard)

**“Structure”** means for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

**“Start of Construction”** includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within the time limit designated by the Hopkinton Zoning Ordinance. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; or does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

**“Substantial Damage”** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**“Substantial Improvement”** means any combination of repairs, reconstruction, alteration, or improvements to a structure in which the cumulative cost equals or exceeds fifty percent of the market value of the structure. The market value of the structure should be (1) the appraised value of the structure prior to the start of the initial repair or improvement, or (2) in the case of damage, the value of the structure prior to the damage occurring. For the purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of a building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or any alteration of a structure listed on the National Register or Historic Places.

**“Violation”** means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44CFR § 60.3(b) (5), (c) (10), (d) (3), (e) (2), (e) (4), or (e) (5) is presumed to be in violation until such time as the documentation is provided.

**“Water Surface Elevation”** means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or the datum, where specified) of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

## **Item II.**

All proposed development in any special flood hazard areas shall require a permit.

## **Item III.**

The Building Inspector shall review all building permit applications for new construction or substantial improvements to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be

constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

#### **Item IV.**

Where new and replacement water and sewer systems (including on-site systems) are proposed in flood-prone areas the applicant shall provide the Building Inspector with assurance that new and replacement sanitary sewage systems will be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems will be located to avoid impairment to them or contamination from them during periods of flooding.

#### **Item V.**

The Building Inspector shall maintain for public inspection, and furnish upon request, any certification of flood-proofing and the as built elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and include whether or not such structures contain a basement. If the structure has been flood-proofed, the as built elevation (in relation to mean sea level) to which the structure was flood-proofed. This information must be furnished by the applicant.

#### **Item VI.**

The Building Inspector shall review proposed developments to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. It shall be the responsibility of the applicant to certify these assurances to the Building Inspector.

#### **Item VII.**

In riverine situations, prior to the alteration or relocation of a watercourse, the applicant for such authorization shall notify the Wetlands Board of the New Hampshire Environmental Services Department and submit copies of such notification to the Building Inspector. Further, the applicant shall be required to submit copies of said notification to those adjacent communities as determined by the Building Inspector.

Within the altered or relocated portion of any watercourse, the applicant shall submit to the Building Inspector, certification provided by a registered professional engineer assuring that the flood carrying capacity of the watercourse has been maintained.

Along watercourses that have a designated Regulatory Floodway no encroachments, including fill, new construction, substantial improvements, and other development are allowed within the designated Regulatory Floodway that would result in any increase in flood levels within the community during the base flood discharge. In Zone A the Building Inspector shall obtain, review, and reasonably utilize any floodway data available from a Federal, State, or other source as criteria for requiring that development meet the floodway requirement of this section.

Along watercourses that have not had a regulatory floodway designated, no new construction, substantial improvements or other development (including fill) shall be permitted within Zone A1-30 and AE on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

#### **Item VIII.**

1. In special flood hazard areas the Building Inspector shall determine the 100 year flood elevation in the following order of precedence according to the data available.

- a. In Zone AE refer to the elevation provided in the communities Flood Insurance Study and accompanying FIRM or FHBM.
  - b. In A zones the Building Inspector shall obtain, review, and reasonably utilize any 100 year flood elevation data available from Federal, State, development proposals submitted to the community (example subdivisions, site approvals, etc.) or other source.
2. The Building Inspector's 100 year flood elevation determination will be used as criteria for requiring in Zones AE and A that:
- a. all new construction and substantial improvement of residential structures have the lowest floor (including basement) elevated to or above the 100 year flood level;
  - b. that all new construction and substantial improvement of non-residential structures have the lowest floor (including basement) elevated to or above the 100 year flood level; or together with attendant utility and sanitary facilities, shall:
    - (i) be flood-proofed so that below the 100 year flood elevation the structure is watertight with walls substantially impermeable to the passage of water;
    - (ii) have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and
    - (iii) be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section;
  - c. all manufactured homes to be placed or substantially improved within special flood hazard areas shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at or above the base flood level; and be securely anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces;
  - d. recreation vehicles placed on sites within Zones AE and A shall be either (i) be on the site for fewer than 180 consecutive days, (ii) be fully licensed and ready for highway use, or (iii) meet all standards of Section 60.3 (b) (1) of the National Flood Insurance Program Regulations and the Elevation and Anchoring Requirements for "Manufactured Homes" in paragraph (c) of Section 60.3;
  - e. for all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding are permitted provided the enclosed areas meet the following requirements: (1) the enclosed area is unfinished or flood resistant, useable solely for parking of vehicles, building access or storage; (2) the area is not a basement; (3) shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: A minimum of two openings have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters;
  - f. proposed structures to be located on slopes in Special Flood Hazard Areas, Zones AH and AO, shall include adequate drainage paths to guide flood waters around and away from the proposed structures.

**Item IX Variances and Appeals:**

1. Any order, requirement, decision or determination of the Building Inspector made under this Ordinance may be appealed to the Zoning Board of Adjustment as set forth in RSA 676:5.
2. If the applicant, upon appeal, requests a variance as authorized by RSA 674:33, I (b), the applicant shall have the burden of showing in addition to the usual variance standards under state law:
  - (a) that the variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense.
  - (b) that if the requested variance is for activity within a designated regulatory floodway, no increase in flood levels during the base flood discharge will result.
  - (c) that the variance is the minimum necessary, considering the flood hazard, to afford relief.
3. The Zoning Board of Adjustment shall notify the applicant in writing that: (i) the issuance of a variance to construct below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions.

The Floodplain Development Ordinance was adopted under Article 7 at the Hopkinton, N.H. Town Meeting held March 9, 1988.